

**REPORT OF SOIL REMEDIATION
NATIONAL STEEL SERVICE CENTER
GREENSBORO, NORTH CAROLINA**

S&ME PROJECT NO. 1584-93-006

MAY 23 1993



April 30, 1993

Bissell Corporation
4602 Dundas Drive
Greensboro, North Carolina 27407

Attention: Mr. Dan Pierce

Reference: Report of Soil Remediation
National Steel Service Center
National Service Road
Greensboro, North Carolina
S&ME Project No. 1584-93-006

Dear Mr. Pierce:

On April 8, 1993, S&ME, Inc. was present at the above referenced site (Figure 006-1) to obtain soil samples from the removal of pump island associated with a 10,000 gallon diesel fuel underground storage tank (UST) that was removed from the site in February, 1993. Evergreen Environmental Services of Kernersville, North Carolina performed the construction related services. This report summarizes the activities performed, the results obtained and our conclusions and recommendations.

The pump island was located adjacent to the circular driveway (Figure 006-2). The concrete pump island was broken up and removed from the site by Evergreen personnel. Soil beneath the former location of the pump island was excavated using a trackhoe. Excavation continued until organic vapor monitoring using an Organic Vapor Analyzer (OVA) and visual inspection indicated that petroleum containing soil had been excavated. Approximately 22 tons of soil were excavated and removed from the site. Two confirmation soil samples were collected for laboratory analysis at the conclusion of the excavation activities. Soil samples were manually collected from the bucket of the trackhoe utilizing disposable latex gloves. Soil samples collected for laboratory

Bissell Corporation
April 30, 1993
Page 2

analysis were placed in laboratory-prepared sample containers, and transported in a chilled container to IEA Laboratory, located in Research Triangle Park, North Carolina. The samples were analyzed for volatile and semi-volatile Total Petroleum Hydrocarbons (TPH) by method SW-846 5030 and SW 846 3550. Results of the laboratory analyses are summarized in Table I. The two samples contained detectable concentrations of semi volatile TPH at levels just above the quantitation limit. The method practical quantitation limits were 2.0 ppm for each analysis.

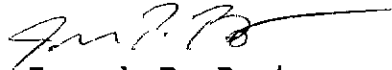
The excavated soil was transported to Teradyne Soil Reclamation, located in Fayetteville, North Carolina for remediation. One triaxle dump truck load of clean soil was imported for use as backfill.

S&ME recommends no further assessment or remedial action at this time.

S&ME appreciates the opportunity to serve as your environmental consultant on this project. If you have any questions or desire additional information, please call.

Sincerely,

S&ME, Inc.


Joseph P. Best
Project Geologist

cc: Sharon Cihak

TABLE 1

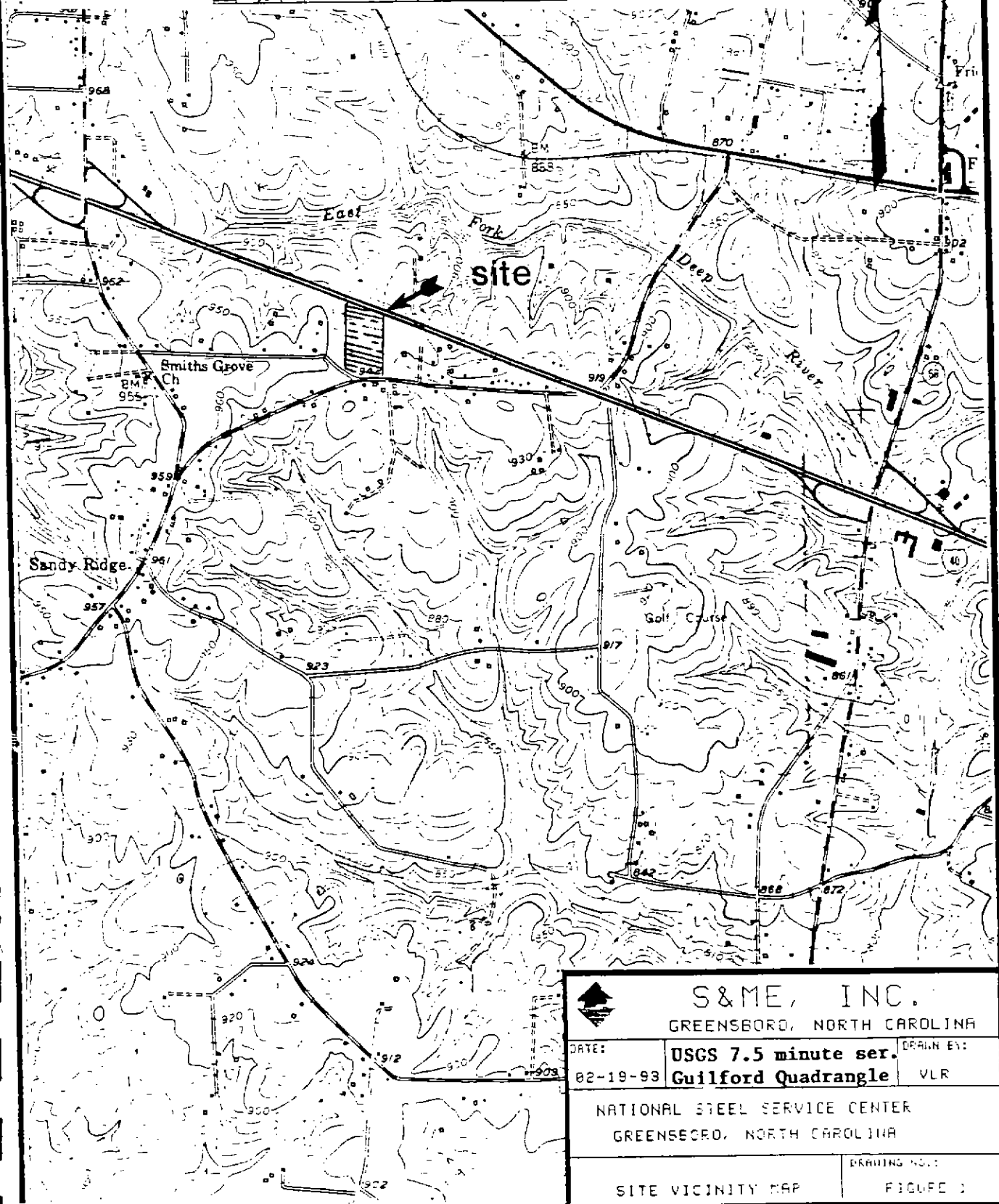
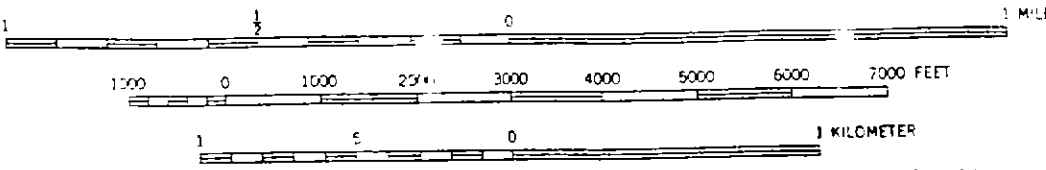
RESULTS OF LABORATORY ANALYSES
NATIONAL STEEL SERVICE CENTER
GREENSBORO, NORTH CAROLINA
S&ME JOB NO. 1584-93-006

<u>Sample Location</u>	<u>Volatile TPH (ppm)</u>	<u>Semi-Volatile TPH (ppm)</u>
Sample 1 (north side)	ND	2.5
Sample 2 (south side)	ND	2.7

ppm - parts per million

ND - not detected at the practical quantitation limits of 2.0 ppm.

SCALE 1:24000



S&ME, INC.

GREENSBORO, NORTH CAROLINA

DATE:

02-19-93

USGS 7.5 minute ser.
Guilford Quadrangle

DRAWN BY:

VLR

NATIONAL STEEL SERVICE CENTER
GREENSBORO, NORTH CAROLINA

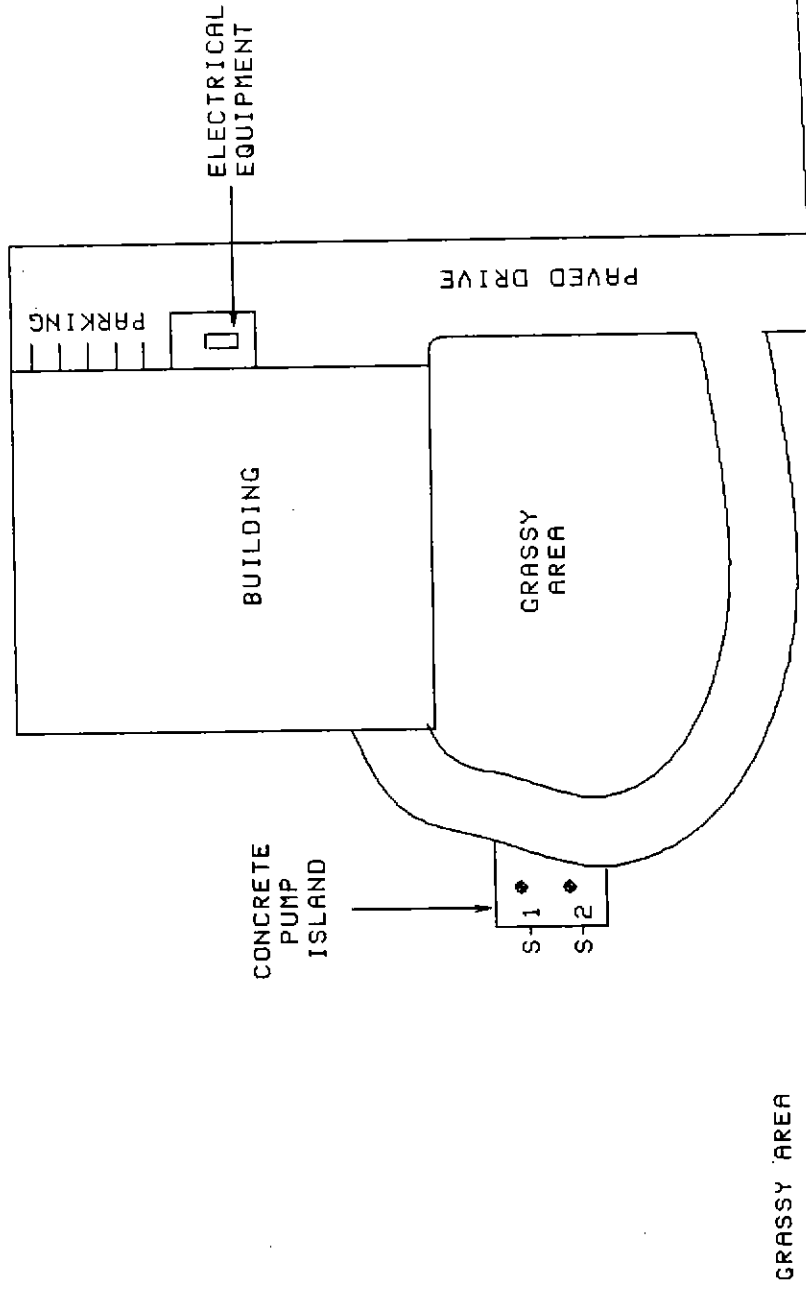
DRAWING NO.:

SITE VICINITY MAP

FIGURE 1



INTERSTATE 40



NOTE: NOT TO SCALE



S&ME, INC.

GREENSBORO, NORTH CAROLINA

DATE:

04-16-93

APPROVED BY:

VLR

NATIONAL STEEL SERVICE CENTER

GREENSBORO, NORTH CAROLINA

DRAWING NO.

006-2

LOCATION PLAN

KEY

◆ TEST BORING LOCATION



IEA

An Aquarion Company

Post Office Box 12846
Research Triangle Park, NC 27709

Phone 919-677-0090
Fax 919-677-0427

April 21, 1993

Joe Best
S&ME Greensboro
3718 Old Battleground Road
Greensboro, NC 27410

IEA Project No.: 552311/9304188
IEA Reference No.: W9304139
Client Project I.D.: 1584-93-006

Dear Mr. Best,

Transmitted herewith are the results of analyses on two samples submitted to our laboratory.

The sample(s) were received chilled and intact.

Analyses were performed according to approved methodologies and meet the requirements of the IEA Quality Assurance Program except where noted. Please see the enclosed reports for your results and a copy of the Chain of Custody documentation.

Please do not hesitate to call your Client Account Representative should you have any questions regarding this report.

Very truly yours,

IEA, Inc.

Linda F. Mitchell
Director, Technical Support Services

State Certification:

Georgia - #816

New Jersey - #67719

California - #1768

Massachusetts - NC039

Tennessee - #00296

Virginia - #00179

West Virginia - #50

Kentucky - #90049

Alabama - #40210

South Carolina - #99021

North Carolina - #37720/#84

Kansas - E-158/E-1189

Monroe,
Connecticut
203-261-4458

Sunrise,
Florida
305-846-1730

Schaumburg,
Illinois
708-705-0740

N. Billerica,
Massachusetts
617-272-5212

Whippany,
New Jersey
201-428-8181

Essex Junction,
Vermont
802-878-5138



IEA

An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Project No: 552-311 Date Sampled: 04-08-93
IEA Sample No: 9304188-01 Date Received: 04-12-93
Client Sample No: S-1 Date Extracted: 04-16-93
Client Project No: 1584-93-006

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil, kerosene, varsol)
Date Analyzed: 04-17-93 Analyzed by: Smith
Time Analyzed: 0542

The sample contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. The concentration is 2.5 mg/kg. The quantitation limit is 2.0 mg/kg.

Comment:

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Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 04-18-93 Analyzed by: Smith
Time Analyzed: 1412

The sample does not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. The quantitation limit is 2.0 mg/kg.

Comment:



IEA
An Aquarion Company

Total Petroleum Hydrocarbon Analysis

IEA Project No: 552-311 Date Sampled: 04-08-93
IEA Sample No: 9304188-02 Date Received: 04-12-93
Client Sample No: S-2 Date Extracted: 04-16-93
Client Project No: 1584-93-006

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil, kerosene, varsol)
Date Analyzed: 04-17-93 Analyzed by: Smith
Time Analyzed: 0622

The sample contains a petroleum hydrocarbon blend with a distillation range similar to #2 fuel oil. The concentration is 2.7 mg/kg.
The quantitation limit is 2.0 mg/kg.

Comment:

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Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 04-18-93 Analyzed by: Smith
Time Analyzed: 1337

The sample does not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. The quantitation limit is 2.0 mg/kg.

Comment:



Total Petroleum Hydrocarbon Analysis

IEA Project No: 552-311 Date Sampled: N/A
IEA Sample No: 9304188 Date Received: N/A
Client Sample No: QC Blank Date Extracted: 04-16-93
Client Project No: 1584-93-006

Extraction (SW 846 - 3550) / GC-FID analysis (for #2 fuel oil, kerosene, varsol)
Date Analyzed: 04-16-93 Analyzed by: Smith
Time Analyzed: 2303

The sample does not contain a petroleum hydrocarbon blend in the distillation range referenced above. The quantitation limit is 2.0 mg/kg.

Comment:

N/A=Not Applicable

Corresponding Samples: 9304188-01 through 9304188-02

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Purge and Trap (SW 846 - 5030) / GC-FID analysis (for gasoline only)
Date Analyzed: 04-18-93 Analyzed by: Smith
Time Analyzed: 0852

The sample does not contain a petroleum hydrocarbon blend with a distillation range similar to gasoline. The quantitation limit is 2.0 mg/kg.

Comment:

N/A=Not Applicable

Corresponding Samples: 9304188-01 through 9304188-02



INDUSTRIAL & ENVIRONMENTAL
ANALYSTS, INC.
1901 NORTH HARRISON AVE.
CARY, N.C. 27513

CHAIN OF CUSTODY RECORD

NO: 3554

REQUESTED PARAMETERS

PROJECT # PROJECT NAME

584-93 National Steel
006

SAMPLERS: (SIGNATURE)

Joe Bar

SAMPLE I.D.	DATE	TIME	COMP	GRAB	STATION LOCATION
S-1	4/8/93	13:30		/	Pump Island
S-2	4/8/93	14:00		/	Pump Island

MATRIX
CONTAINERS
OF
WATER

TPH 5000
+ 3550

2
2

IEA QUOTE NO.

RELINQUISHED BY (SIGNATURE) DATE TIME RECEIVED BY DATE TIME

Joe Bar 4/8/93 08:30

RELINQUISHED BY (SIGNATURE) DATE TIME RECEIVED FOR LAB BY DATE TIME

Joe Bar 4/8/93 10:00

PROJECT MANAGER (PLEASE PRINT)

1992

P.O. NO.

FIELD REMARKS

IEA REMARKS

552-311